

Date: Thursday, 23/10/2008 10:54:00 AM  
 User: Julie Dawson

## Process Sheet

**Customer** : CU-DAR001 Dart Helicopters Services  
**Job Number** : 42883  
**Estimate Number** : 10495  
**P.O. Number** :  
**This Issue** : 23/10/2008 **S.O. No.** :  
**Prsht Rev.** : NC  
**First Issue** : // **Type** : MACHINED PARTS  
**Previous Run** : 41338  
**Written By** :  
**Checked & Approved By** : JUL 08.10.23  
**Comment** : est rev H 07.06.12 ecn 825 EC

**Drawing Name** : LITTER TIE DOWN ASS'Y (LOCKING) - UNDER REVIEW  
**Part Number** : D2360  
**Drawing Number** : D2360/D2341  
**Project Number** : N/A  
**Drawing Revision** : D / F  
**Material** :  
**Due Date** : 15/11/2008 **Qty:** 6 **Um:** Each  
*[Handwritten signature]*

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description:	
1.0	D6201	"T" Extrusion	
		Comment: Qty.: 1.1067 f(s)/Unit Total: 6.6402 f(s) 5.5335 Material: D6201 (6061-T6 (QQ-A-200/8) 4" x 4" x 3/8" Thick 'T' extrusion) Batch: 36793	H.A 08/10/25
2.0	BAND SAW	BAND SAW	
		Comment: BAND SAW Cut blanks: 12.65" Long	H.A 08/10/25
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1	
		Comment: HAAS CNC VERTICAL MACHINING #1 Machine as per Folio D2341 and Dwg D2341	PTC
4.0	QC2	2-Deburr	 INSPECT PARTS AS THEY COME OFF MACHINE
		Comment: INSPECT PARTS AS THEY COME OFF MACHINE	H.A 08/10/25
5.0	QC8	SECOND CHECK	
		Comment: SECOND CHECK	5 08/10/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2360 PAR #: N/A Fault Category: Prog. Mach. NCR: Yes No DQA: H Date: 08-11-03  
 (D350-616-011-013) Scarp / Scarp QA: N/C Closed: H Date: 08/11/20

NCR: 42883		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
8/10/27	#30	During machining the contours a piece of contout got caught in between Distance 0.750" and 3.133" (see Dwg.)	CP 08-10-27 ASL 042	SCRAP and Destroy. no profile an extra was made	H.A 08/10/27 ASL 042	(S) 68/10/27	CP 08-10-27 ASL 042	S 08/10/27
		D2341 for highlights area was causing the part to bend and machine smaller. R.C. & chips didn't clean out.	/	fix SAs to prevent from happening again	/ 08-10-27 ASL 042	/ 08/10/27 ASL 042	/	S 08/10/27
		churn machining		See last page for clarification	/ 08-11-18			S 08/10/27

NOTE: Date & initial all entries

Date: Thursday, 23/10/2008 10:54:01 AM  
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: LITTER TIE DOWN ASS'Y (LOCKING) - UNDER REVIEW

Job Number: 42883

Part Number: D2360

Job Number:



Seq. #: Machine Or Operation:

Description :

6.0 HAND FINISHING



HAND FINISHING RESOURCE #1



(5X)

Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

M.F.

08/10/07

7.0 POWDER COATING



POWDER COATING

m109152



(5)

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

7:45

OVEN TEMPERATURE:

320°

FINISH TIME:

8:15

F.L. 08/10/28

8.0 QC3



INSPECT POWDER COAT/CHEMICAL CONVERSION



90

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-10-28

(RS)

9.0 D2002015



Knob



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Knob

16177

PC

10.0 D2345



Lock Channel



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Lock Channel

16177

39474

PC

11.0 D2366-



Lock Handle



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Inventory

37431

PC

12.0 D2367



Handle Knob



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Inventory

33794

PC 8/10/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: LITTER TIE DOWN ASS'Y (LOCKING) - UNDER REVIEW

Job Number: 42883

Part Number: D2360

Job Number:



Seq. #: Machine Or Operation:

Description :

13.0 D2372 Quick Release



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)  
Quick Release 41426

14.0 D2373 Spring



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)  
Spring 41427

15.0 D2444 Pip Pin Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)  
Pip Pin Assembly 41429

16.0 AN526C1032R18 Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)  
Screw 101458

17.0 AN960JD10 Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)  
Washer 109059

18.0 AN960JD10L Washer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 48.0000 Each(s)  
Washer M105793

19.0 MS20470AD34 Rivet,Universal Head



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)  
Rivet,Universal Head 15541

20.0 MS21042L3 Nut



Comment: Qty.: 3.0000 Each(s)/Unit Total : 18.0000 Each(s)  
Nut M10903

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Drawing Name: LITTER TIE DOWN ASSY (LOCKING) - UNDER REVIEW

Job Number: 42883

Part Number: D2360

Job Number:



Seq. #: Machine Or Operation:

Description :

21.0 MS27039113 Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)  
Screw M10 52/11

22.0 MS27039115 Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)  
Screw M10 8169

23.0 NAS679A3W Nut



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)  
Nut 1463

24.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1  
Assemble as per dwg D2360

25.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

26.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ST185

DS 08/10/30 X5

27.0 QC21 FINAL INSPECTION/W/O RELEASE



08/11/03 XJ

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W 08.11.03

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	L2883
Description: Litter Tie Down Bracket (Locking)	Part Number:	D2341
Inspection Dwg: D2341	Rev: F	Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      Prototype

Measured by:	J.A	Audited by:	<u>Jin</u>	Prototype Approval:	N/A
Date:	08/10/25	Date:	08/10/25	Date:	N/A

<b>Rev</b>	<b>Date</b>	<b>Change</b>	<b>Revised by</b>	<b>Approved</b>
A	06.05.24	New Issue P/O D2360	KJ/JLM	
B	07.07.17	Dwg Rev. updated	KJ/JLM	Z

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng/ Prod Mgr	Approval QC Inspector

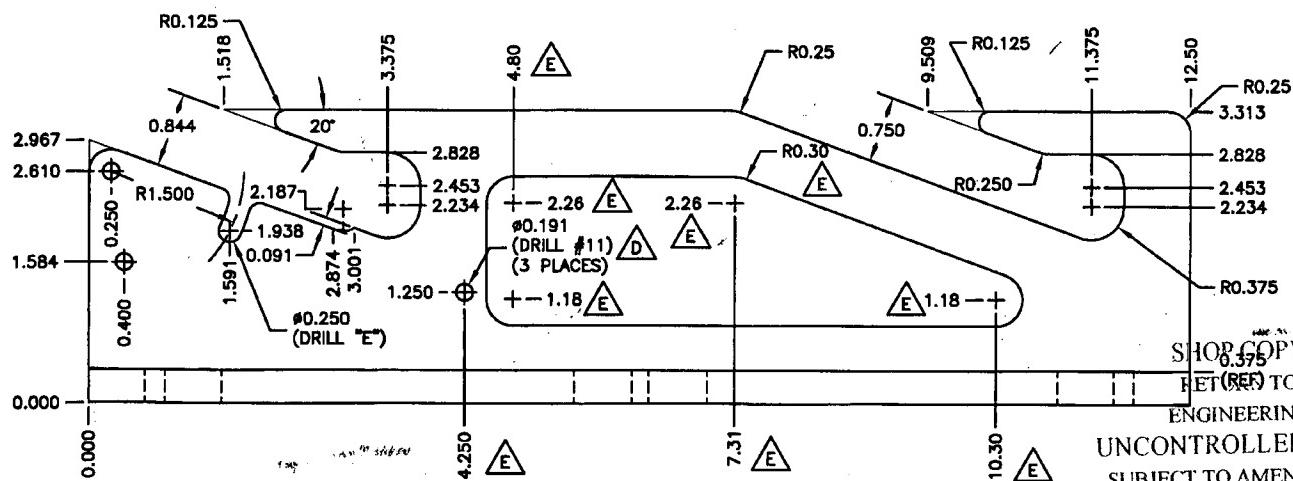
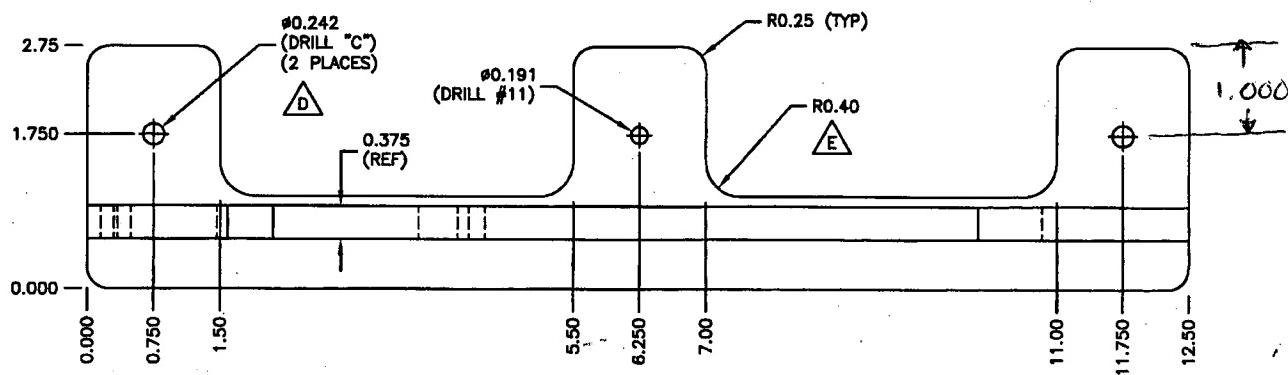
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN BW	DRAWN BY <i>SC</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>B</i>	APPROVED <i>MM</i>	DRAWING NO. D2341	REV. F SHEET 1 OF 1
DATE 07.06.07		TITLE LITTER TIE DOWN BRACKET (LOCKING)	SCALE 1:2
A	95.01.13	NEW ISSUE	
B	95.02.14	MODIFIED LOCK	
D	95.02.20	CHANGES TO DIAMETERS	
E	97.10.01	CHANGES FOR MACHINING	
F	07.06.07	REVISED NOTES; FINISH WAS ANODIZE	



**D2341 LITTER TIE DOWN BRACKET (LOCKING)**

- 1) MATERIAL: MAKE FROM D6201-0125 EXTRUSION (6061-T6/T651 PER QQ-A-200/B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (REF. 4.3.5.1) PER QSI 005 4.3
- 3) BREAK ALL SHARP EDGES TO 0.005 TO 0.010
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFY WITH DART P/N "D2341" USING FINE POINT PERMANENT INK MARKER

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WORK ORDER

NO. *42883*

**RELEASED**

*07-06-22*

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN <b>BW</b>	DRAWN BY <b>CB</b>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <b>CE</b>	APPROVED <b>JH</b>	DRAWING NO. D2360	REV. D SHEET 1 OF 2
DATE 07.06.06	TITLE LITTER TIE DOWN ASSEMBLY (LOCKING) NTS		SCALE
A	95.02.10	NEW ISSUE	
B	95.02.20	RE-DESIGN	
C	97.08.27	ADD MS20470AD3-4 RIVET	
D	07.06.06	D2002-015 WAS D2376; SECTION B-B QTY(2) AN960JD10 WAS QTY(3) QTY(8) AN960JD10L WAS QTY(5)	

**RELEASED**07.06.06 **HH****PARTS LIST:**

QTY	PART NUMBER	DESCRIPTION
X	D2360	LITTER TIE DOWN ASSEMBLY (LOCKING)
1	D2341	LITTER TIE DOWN (LOCKING)
1	D2345	LOCK CHANNEL
2	D2366	LOCK HANDLE
1	D2367	KNOB (DELRIN)
2	D2372	QUICK RELEASE FASTENERS
1	D2373	SPRING
2	D2002-015	KNOB (DELRIN)
1	D2444	PIP PIN
1	AN526C1032R18	SCREW
2	AN960JD10	WASHER
8	AN960JD10L	WASHER
1	MS20470AD3-4	RIVET
3	MS21042L3	NUT (OR MS21042-3)
1	MS27039-1-13	SCREW
2	MS27039-1-15	SCREW
1	NAS679A3W	NUT

D

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

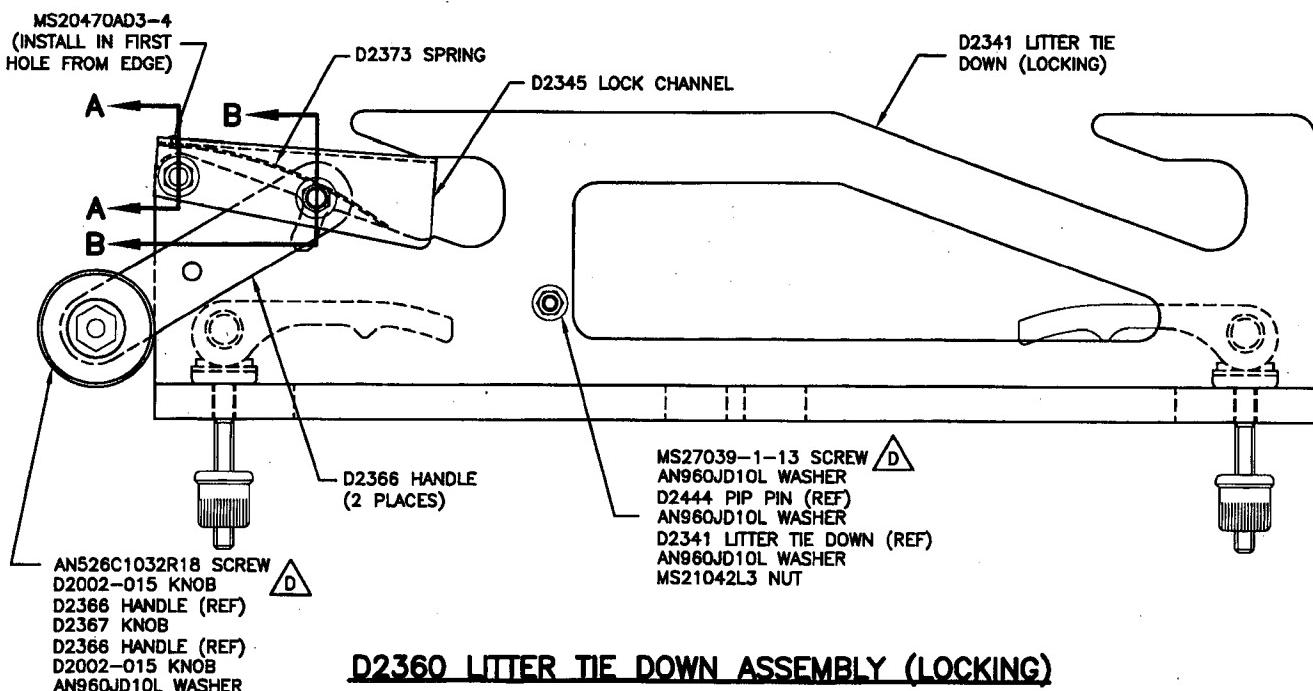
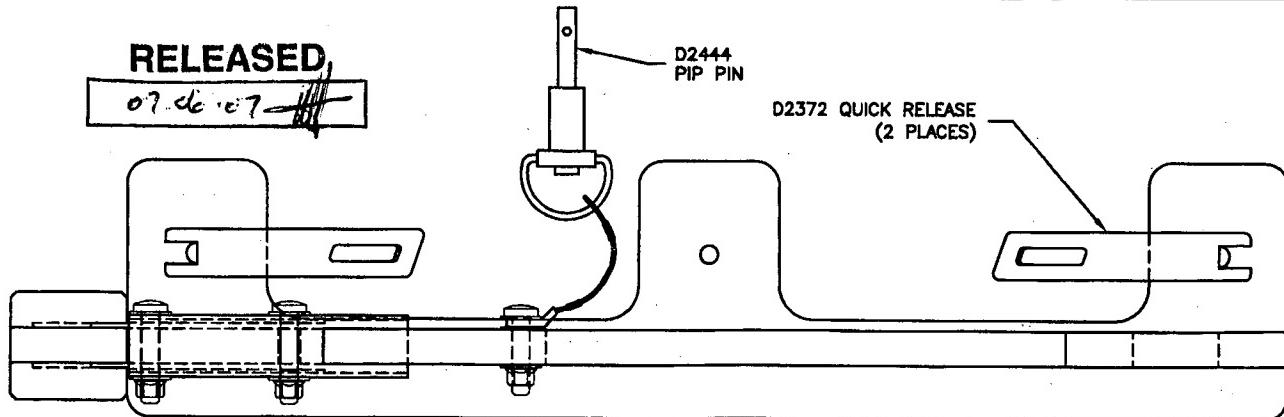
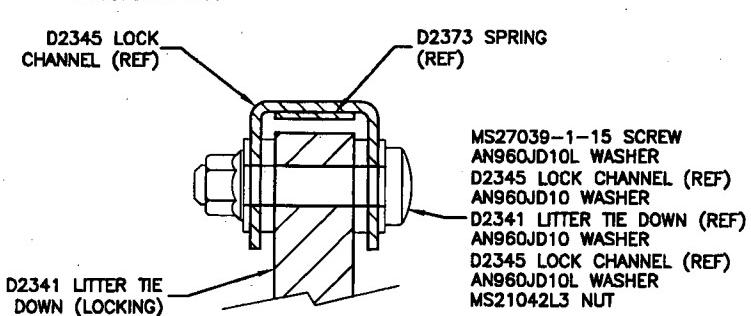
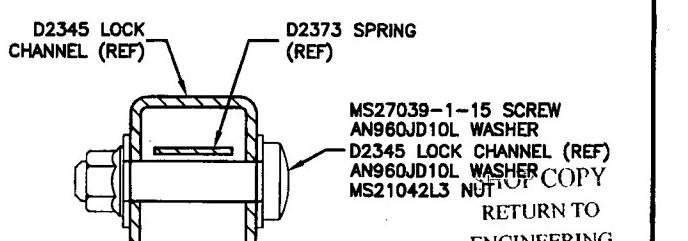
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 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN BW	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CE</i>	APPROVED <i>TH</i>	DRAWING NO. D2360	REV. D SHEET 2 OF 2
DATE 07.06.06		TITLE LITTER TIE DOWN ASSEMBLY (LOCKING) NTS	SCALE

**RELEASED,**07.06.07 ~~07.06.07~~**D2360 LITTER TIE DOWN ASSEMBLY (LOCKING)****SECTION A-A**  
(SCALE 1:1)**SECTION B-B**  
(SCALE 1:1) □ D

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_ See Back of First Page

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08-10-27	3.0	While machining the contour, a piece of the material, was caught between the part, and the tool at the 0.750" & 3.313" location, causing the part to bend, and be machined smaller along the top. R.C: Chips were building up during machining, inside the jaws on the vise. Process #	QSIU12	- Part was scrapped & re replace. - A section of the Jaws was machined out, to allow the chips to remove during machining, and not build up.	QSIU12 08-11-18	QSIU12 08-11-18	QSIU12 08-11-18	QSIU12 08-11-18

NOTE: Date & initial all entries